

**4th Sem.**  
**Branch : Electrical**  
**Sub. : Utilization of Electrical Energy**

**Time : 3 Hrs.** **M.M. : 60**

**SECTION-A**

**Note: Multiple type Questions. All Questions are compulsory.** (6x1=6)

Q.1 The process of electrolysis is governed by \_\_\_\_\_. (COE3)

- a) Faraday's Laws
- b) Joule's Laws
- c) Ohm's Law
- d) Kirchhoff's Laws

Q.2 Which of the following is used in floodlighting? (COE1)

- a) Sodium vapour lamp
- b) LED lamp
- c) Incandescent lamp
- d) Halogen lamp

Q.3 The speed time curve is used in electric traction to study: (COE5)

- a) Acceleration
- b) Speed variations over time
- c) Power consumption
- d) Braking system

Q.4 The unit of electroplating process is : (COE3)  
a) Joule b) Coulomb  
c) Farad d) Watt

Q.5 In electric drives. Which type of motor is commonly used for industrial drives? (COE4)

- a) Synchronous moto
- b) Induction motor
- c) Stepper motor
- d) DC motor

Q.6 Which of the following is an example of dielectric heating? (COE1)

- a) Microwave heating
- b) Resistance heating
- c) Arc heating
- d) Infrared heating

**SECTION-B**

**Note: Objective/Completion type questions. All questions are compulsory.** (6x1=6)

Q.7 \_\_\_\_ Lamps are widely used for street lighting. (COE1)

Q.8 \_\_\_\_ is a process used to protect metals from corrosion by coating them with a layer of zinc. (COE5)

Q.9 Single phase to dc system is also called \_\_\_\_\_. (COE5)

Q.10 IN resistance heating, the heating element is generally made of \_\_\_\_\_. (COE2)

Q.11 In electric traction \_\_\_\_\_ systems are used to collect current from overhead wires. (COE5)

Q.12 An electric drive consists of a motor and a \_\_\_\_\_. (COE4)

### SECTION-C

**Note: Short answer type Questions. Attempt any eight questions out of ten Questions. (8x4=32)**

Q.13 Explain the various terms used in illumination. (COE1)

Q.14 Compare electric welding with other methods of welding. (COE2)

Q.15 Explain the process of dielectric heating and its applications. (COE4)

Q.16 What is the role of motors in electric drives? (COE4)

Q.17 Discuss the overhead catenary wire system used in electric traction. (COE5)

Q.18 What are the laws of electrolysis? Explain their significance. (COE3)

Q.19 Describe the anodizing process and its applications. (COE4)

Q.20 Discuss the factors influencing the selection of electric motors for industrial drives. (COE3)

Q.21 What are the advantages of electric traction over conventional methods. (COE5)

Q.22 Explain the use of electrical circuits in refrigeration and air conditioning systems. (COE3)

### SECTION-D

**Note: Long answer questions. Attempt any two questions out of three Questions. (2x8=16)**

Q.23 Explain system of track electrification. Explain single phase Ac to Dc system with its advantages and disadvantages. (COE5)

Q.24 Explain of method of power transfer by using belt drive and by using chain drive method. (COE4)

Q.25 Describe the process of electro-deposition and its industrial applications. (COE3)